

In the Claims:

Applicants hereby restate the claims of the present application as follows:

1-38. (cancelled)

39. (New) A non-woven mat as half-stuff comprising a first fibre made of a thermoplast with a fibre length of between 0.1 mm to 30 mm and having a weight proportion of 30% to 90%, and a reinforcing fibre with a fibre length of 0.1 mm to 30 mm, the temperature stability of the reinforcing fibre being greater than that of the first fibre and having a weight proportion of 70% to 10%, the first fibre and the reinforcing fibre being bonded merely at the intersection or contact points with 1% to 10% by weight of a binder, the weight proportions being relative to the entire formulation of the non-woven mat, the fiber length of the first fibre being smaller than that of the reinforcing fibre, the non-woven mat having a weight of between 8 g/m² and 400 g/m².

40. (New) A non-woven mat according to claim 39, wherein the length of the first fibre is between 2 mm and 6 mm.

41. (New) A non-woven mat according to claim 40, wherein the length of the first fibre is between 2.5 mm and 3.5 mm.

43. (New) A non-woven mat according to claim 39, wherein the length of the reinforcing fibre is between 6 mm and 18mm.

44. (New) A non-woven mat according to claim 43, wherein the length of the reinforcing fibre is between 6 mm and 12 mm.

45. (New) A non-woven mat according to claim 39, wherein the first fibre is selected from polyether etherketone, poly-p-phenylene sulphide, polyether imide, polyether sulphone, and mixtures thereof.

46. (New) A non-woven mat according to claim 39, wherein the reinforcing fibre is selected from glass fibre, aramide fibre, carbon fibre, ceramic fibre, metal fibre, polyimide fibre, polybenzoxazole fibre, natural fibre, and mixtures thereof.

47. (New) A non-woven mat according to claim 39, wherein the binder is selected from compounds which are constructed based on polyacrylate, polyvinyl acetate, polyvinyl alcohol, polyurethane, resins, polyolefins, aromatic polyamides, and copolymers or mixtures thereof.

48. (New) A non-woven mat according to claim 47, where the binder form is selected from filaments, fibrils, and fibrous binders, and the geometry of the binder has an aspect ratio in the range of 1:1 to 1:100,000.

49. (New) A non-woven mat according to claim 39, further comprising additional additives.

50. (New) A non-woven mat according to claim 49, wherein the additives are selected from tribological additives, additives made from fibres, filaments, fibrils, pulps, metallic or ceramic powder, organic powder, and mixtures thereof.

51. (New) A non-woven mat according to claim 50, wherein the additives are selected from PTFE fibres or powder, PI fibers, aramide fibres, carbon fibres or powder, and metal powder.

52. (New) A non-woven mat according to claim 39, wherein the mat has a density of between 30 kg/m^3 and 500 kg/m^3 .

53. (New) A non-woven mat according to claim 39, wherein the mat has a thickness of 0.1 mm to 4 mm.

54. (New) A non-woven mat according to claim 39, further comprising a flat substrate applied to at least one outer surface of the mat.

55. (New) A non-woven mat according to claim 54, wherein the flat substrate is in the form of a woven fabric, plaited fabric, paper or another non-woven mat.

56. (New) A non-woven mat according to claim 39, wherein the first fibre and the reinforcing fibre are both distributed homogeneously throughout the mat.

57. (New) A non-woven mat according to claim 39, wherein the first fibre or the reinforcing fibre are distributed inhomogeneously throughout the mat.

58. (New) A method for producing a non-woven mat composed of a first fibre made of a thermoplast with a fibre length of between 0.1 mm to 30 mm and having a weight proportion of 30% to 90%, and a reinforcing fibre with a fibre length of 0.1 mm to 30 mm, the temperature stability of the reinforcing fibre being greater than that of the first fibre and having a weight proportion of 70% to 10%, the first fibre and the reinforcing fibre being bonded merely at the intersection or contact points with 1% to 10% by weight of a binder, the weight proportions being relative to the entire formulation of the non-woven mat, the fiber length of the first fibre being smaller than that of the reinforcing fibre, the non-woven mat having a weight of between 8 g/m² and 400 g/m², the method comprising the steps of: dispersing said first fibre and said reinforcing fibre in a dispersion medium, filtering the fibre containing dispersion medium through a diagonally running wire belt to form a filtrate, compacting the filtrate to form a web, drying the web, and adding said binder to either the dispersion medium or to the filtrate.

59. (New) The method of claim 58, wherein the binder is added in the form of fibres in a dispersion agent.

60. (New) The method of claim 58, further comprising a step of introducing additives in the form of fibres or powders to said non-woven mat.

61. (New) The method of claim 60, wherein the introducing step is performed during said dispersing or filtering steps.

62. (New) The method of claim 58, further comprising the steps of controlling the composition and supply speed of said dispersions toward the wire belt, and controlling the speed of the belt to achieve a desired weight or the thickness of the mat.

63. (New) The method of claim 58, further comprising a step of placing a sheet material on the diagonal wire belt.

64. (New) The method of claim 63, wherein the sheet material is selected from a plaited fabric, woven fabric or another non-woven mat.

65. (New) A fibre composite produced from a half-stuff non-woven mat, the mat comprising a fibre matrix made of a thermoplast with a fibre length of between 0.1 mm to 30 mm and having a weight proportion of 30% to 90%, and a reinforcing fibre with a fibre length of 0.1 mm to 30 mm, the temperature stability of the reinforcing fibre being greater than that of the first fibre and having a weight proportion of 70% to 10%, the first fibre and the reinforcing fibre being bonded merely at the intersection or contact points with 1% to 10% by weight of a binder, the weight proportions being relative to the entire formulation of the non-woven mat, the fiber length of the first fibre being smaller than that of the reinforcing fibre, the non-woven mat having a weight of between 8 g/m² and 400 g/m², the fibre composite containing 30% to 90% by weight of a reinforcing fibre with a fibre length of 0.1 mm to 30 mm, the reinforcing fibre being oriented anisotropically in the composite matrix, the composite having a density of 0.25 g/cm³ to 6 g/cm³.

66. (New) The fibre composite of claim 65, wherein the reinforcing fibre is selected from glass fibres, aramide fibres, carbon fibres, ceramic fibres, and mixtures thereof.

67. (New) The fibre composite of claim 65, wherein the matrix thermoplast is selected from polyether etherketone, poly-p-phenylene sulphide, polyether imide and polyether sulphone.

68. (New) The fibre composite of claim 65, wherein the density of the fibre composite is 30% to 100% of the maximum achievable density calculated from the densities of the matrix materials and reinforcing fibres.

69. (New) The fibre composite of claim 65, further comprising a functional layer on at least one side of the composite.

70. (New) The fibre composite of claim 65, wherein the composite has a total thickness of between 0.01 mm and 1.6 mm.

71. (New) The fibre composite of claim 65 produced by the co-compaction of at least two of said non-woven mats.

72. (New) The fibre composite of claim 71 wherein the co-compaction is achieved at a pressure of 0.05 N/mm² to 15 N/mm².